INSTALLATION MANUAL

Laundry Chute Solutions Ltd

Laundry Chute Installation Instructions

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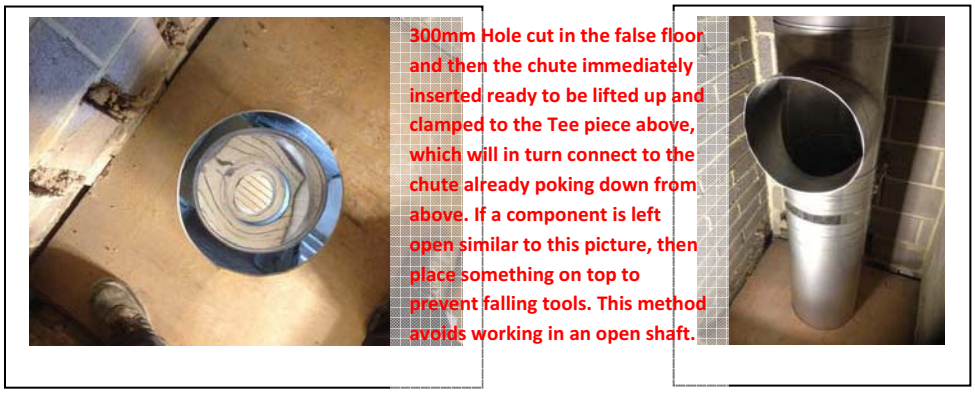
Introduction

- Thank you for considering or deciding to purchase one of our laundry chutes. Laundry Chute Solutions Limited (LCS) manufacture all our own components from high grade materials in the UK, specifically designed to be installed into new and old buildings; taking into account the types of construction, building materials and layouts that are commonly used here.
- Our laundry chute is a one-off purchase. Think it through, plan it well and once installed, it will cost nothing to run, is virtually maintenance free and will provide a lifetime of trouble free operation. Get it right, because you will use it every day.
- This manual is invaluable as an aid to help design a chute for your needs and determine the components required. Please read the entire manual to help you fully appreciate what is involved and ease the ordering and installation process.
- Our chutes are easy to install and even those with a basic understanding of DIY can achieve a perfect end result. By ensuring you have a good understanding of these instructions, the installation will be easier and mistakes eliminated.
- All our chute components are made from the highest grade, 30-minute fire resistant stainless steel (1.4301) available. We are unaware of any other company using such high grade material. Don't be frightened to ask for the specification and proof of fire rating if comparing our product. We are unaware of any imported chutes (including from Germany) that comply with such high standards.
- The component drawings accompanying this manual represent our stock items. Virtually any configuration can be designed using these components; however, we are able to make special components for bespoke requirements.
- This manual primarily deals with 300mm chute installations in domestic applications, however, the principals are the same for a 400, 500 or 600mm chute supplied by us for commercial purposes.
- If you require help or have a question, whatsoever, please call or email us:
  01981 540836 - info@laundrychutesolutions.co.uk

Safety

- Stainless steel contains sharp edges, always wear appropriate, sturdy gloves and handle with care.
- Always wear a hard hat/safety helmet when someone is working above. A falling screwdriver or spanner will kill.
- Always wear safety eye protection when drilling, grinding or cutting.
- Be very careful when working over or within an open shaft. Appropriate harness, fall restraint, fall arrest or site specific safety measures must be practiced by the appointed installer.
- The safest practice when working in a shaft is to build sturdy false floors at each level using hung joists and ply or chip board flooring. Ensure the joist spacing will allow for the passage of the chute size you are using in the correct location. By starting from the top, working down and only cutting an accurate hole for the chute as required, and immediately feeding the chute and clamping it in place, you virtually eliminate the possibility of a fall or dropped tools. You can also use a step ladder within the chute.


300mm Hole cut in the false floor and then the chute immediately inserted ready to be lifted up and clamped to the Tee piece above, which will in turn connect to the chute already poking down from above. If a component is left open similar to this picture, then place something on top to prevent falling tools. This method avoids working in an open shaft.

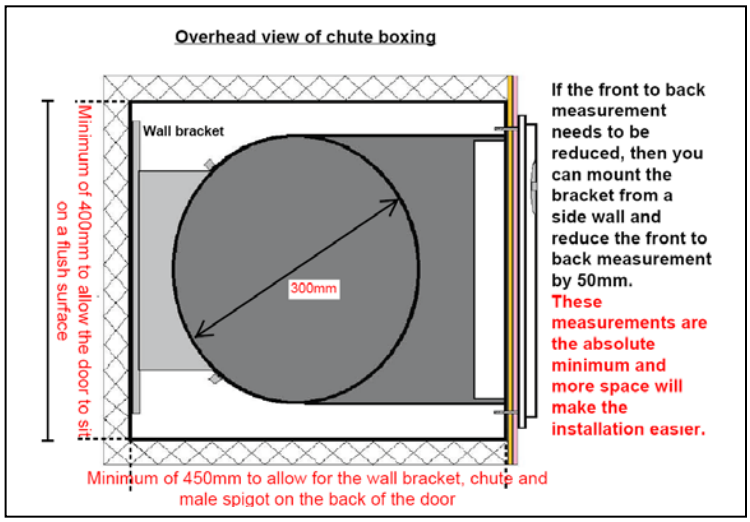
- Always cover the open chute, especially when working above to prevent falling matter and protect the chute from damage.

Tools & Fixings Required

- Hacksaw or disc cutter
- Pencil
- 6ft spirit level
- Short level or scaffold level
- 13mm & 17mm Spanner or socket ratchet
- 4mm Allen Key
- Pliers
- SDS Drill with 10 & 12mm drill bits
- 10mm Wall plugs
- 8mm Coach screws
- 10mm Threaded bar
- Chemical anchor kit
- Step ladder

Planning Your Chute

- A laundry chute installation is a one-off purchase. Once installed, it costs nothing to run, is virtually maintenance free and will last as long as your property exists. **Get it right because you will use it EVERYDAY.**
- If you are building a new property then the chute can be designed and easily incorporated during the build.
- Attempt to keep the drop as simple and vertical as possible. Remember that any chute is better than none; if the overriding building design or existing structure preclude the door(s) or chute termination from being in the perfect location, it is still easier to make a short walk on the same floor to deposit or retrieve laundry than carrying it down stairs.
- If you have three or more floors, don't ignore the levels without bedrooms. You still need to wash hand towels and tea cloths; a discreet chute door near the kitchen, when there is a laundry or utility room below will prove invaluable.
- Determine your chute length by measuring the total drop to include the floor depths, top door height and termination point. Making a scale drawing, and then use the component technical drawings on our web site to achieve a design and determine the required components. The suggested designs on accompanying sheets may also provide help.
- Alternatively, simply email us your plan drawings to include some elevation measurements and we will design a chute for you - plans@laundrychutesolutions.co.uk
- When measuring your drop and establishing the components required, bear in mind that there is a 65mm insert on the flared female end of the chute component. Therefore, when you connect two components, you will lose 65mm in length. For instance, the total length of 2 x 1000mm extension pieces is 2935mm.
- When determining the chute location, take into account the size of the encasement required if creating a boxing around the chute. The sizes of the boxing are different for surface and flush mount doors. If you want the smallest possible chute encasement, then you will have to use a surface mount door. See the diagram on the following page.

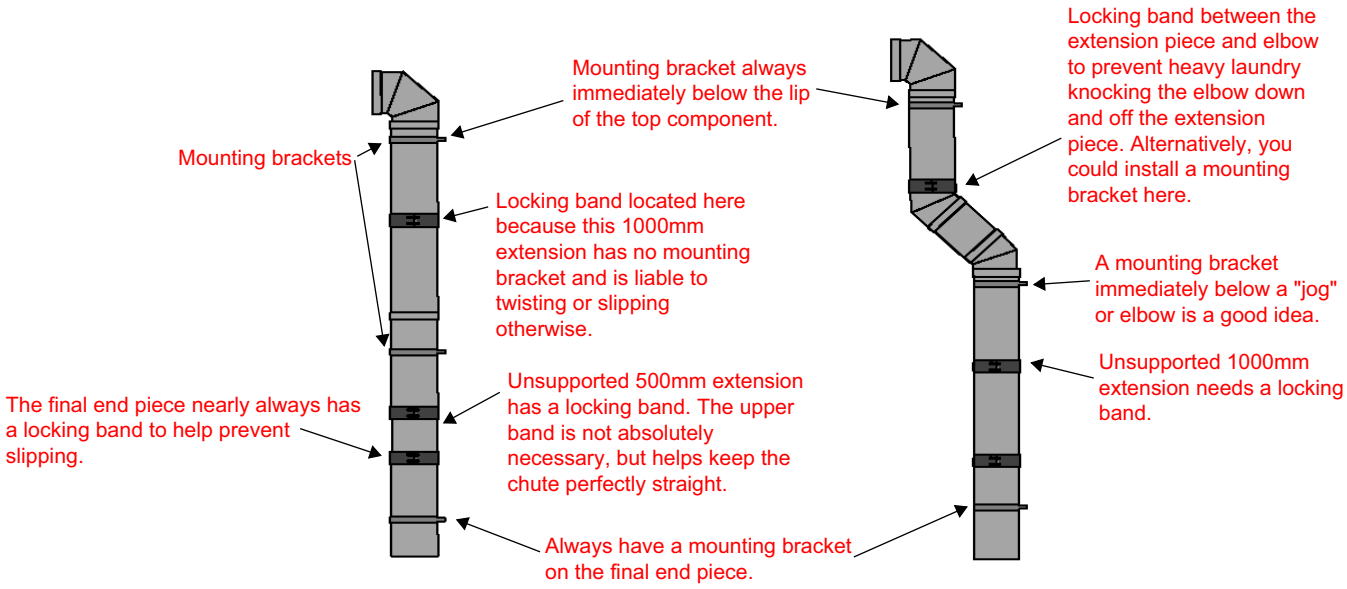

Overhead view of chute boxing
Wall bracket
300mm
Minimum of 400mm to allow the door to sit on a flush surface
Minimum of 450mm to allow for the wall bracket, chute and male spigot on the back of the door
If the front to back measurement needs to be reduced, then you can mount the bracket from a side wall and reduce the front to back measurement by 50mm.
These measurements are the absolute minimum and more space will make the installation easier.

Working out the number of mounting brackets & locking bands

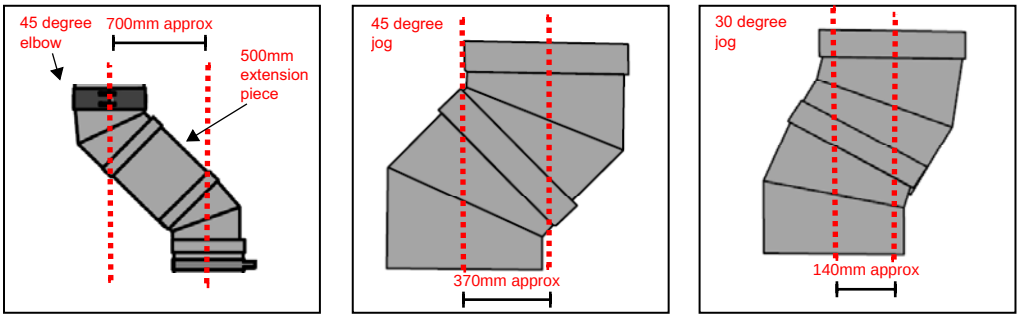
- Mounting brackets are always required immediately below a 90° elbow or close behind a chute door or bung on the first extension piece, and on a 50mm or 1000mm end piece at the bottom. The remaining mounting brackets should be spaced evenly as shown below. As a rule, no more than two consecutive extension pieces should be installed without being supported with a mounting bracket. It is very rare for a bracket to be required on an elbow. The table below gives an accurate indication of the number of mounting brackets required for the number of extension pieces required.
- Locking bands are not required at every join. Any extension piece without a mounting bracket attached should have at least one locking band to prevent twisting and slipping. If a long length of unsupported extensions are being used (fed down or up an existing enclosed shaft for instance), then a locking band should be used on every join and additional mounting brackets located below this assembly to support the extra weight. A normal installation will require the number of locking bands as indicated in the table below.

Total number of 500mm and 1000mm extension/end pieces	Number of mounting brackets required	Total number of 500mm and 1000mm extension/end pieces	Number of locking bands required
2	2	2	1
3	2	3	1
4	3	4	2
5	3	5	2
6	4	6	3
7	4	7	3
8	5	8	4
9	5	9	4
10+	6+	10+	5+

Working out the number of mounting brackets & locking bands


Mounting bracket always immediately below the lip of the top component.
Locking band between the extension piece and elbow to prevent heavy laundry knocking the elbow down and off the extension piece. Alternatively, you could install a mounting bracket here.
Mounting brackets
Locking band located here because this 1000mm extension has no mounting bracket and is liable to twisting or slipping otherwise.
A mounting bracket immediately below a "jog" or elbow is a good idea.
Unsupported 1000mm extension needs a locking band.
The final end piece nearly always has a locking band to help prevent slipping.
Unsupported 500mm extension has a locking band. The upper band is not absolutely necessary, but helps keep the chute perfectly straight.
Always have a mounting bracket on the final end piece.

- If you are using two 45° or 30° to create an “S” or “Jog” to shift the drop over as in the second diagram above, then you will need to add a locking band or mounting bracket as per the instructions.
- When planning a “jog” the following measurements may be useful.



- When determining the exact location of the chute drop in relation to the sides of the chute shaft or encasement it is important you decide which style of chute door you will use and READ THE LAUNDRY CHUTE DOOR INSTALLATION INSTRUCTIONS.
- Once you have planned your chute and know what method of fixing you intend to use, you can order the correct fixing parts from Laundry Chute Solutions. It is best to use stainless steel fixings.
- If you are fixing into soft insulation block, it is better to use threaded bar and chemical anchor to fix your mounting brackets.

Installing the chute

1. Start by “pegging out” your chute and marking the top and bottom locations of each component on the wall. Remember to take into account the 60/65mm overlap of the components. At the same time, drop a plumb line or mark the centre line of the chute using a long level.
   Look at the chute door mounting instructions – This will help plan your chute location.

2. Establish the locations of your mounting brackets and secure them to the wall.
   There are two ways of fixing the brackets depending on how far the chute needs to stand off the supporting wall. If the brackets are being fixed directly to the wall, then they hold the chute 50mm off, and instruction 2.1 below should be used. If the chute needs to stand further than 50mm away from the wall, then instruction 2.2 should be used.
   Not all mounting brackets need to mount off the same wall. Side walls can also be used. If you want to mount the chute tight to the back wall, then the mounting brackets will have to mount on the side wall.

2.1 Installing a mounting bracket straight onto a wall

Examples of mounting brackets attached straight to the wall

Brackets can be packed out off the wall if required

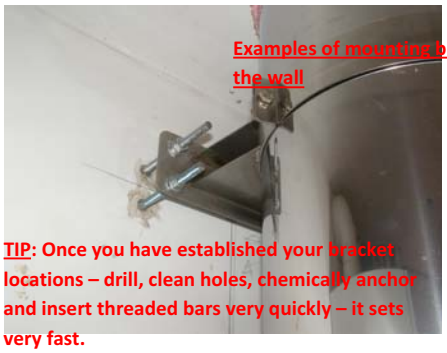
2.1a Offer up the mounting bracket with the cut out “V” in the middle of the bracket on your marked centre line. Make sure the bracket is level.

2.1b Mark the four oval fixing holes on the bracket and then drill 4 x 10mm holes to the depth of 60mm.

2.1c Use 10mm wall plugs, M8 x 60mm stainless steel coach screws and M8 stainless steel penny washers to fix the bracket to the wall.

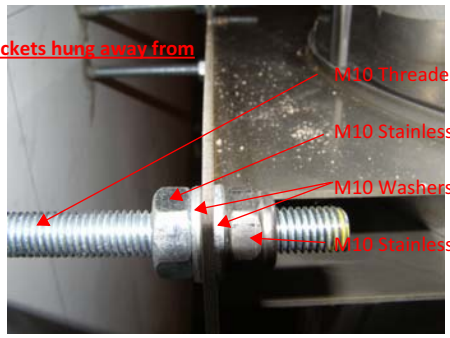
2.1d The holes in the mounting bracket are oval and the smaller 8mm coach screws allow you to manoeuvre the bracket and ensure it sits central and level.

2.2 Installing a mounting bracket when it stands off the wall



Examples of mounting brackets hung away from the wall

TIP: Once you have established your bracket locations – drill, clean holes, chemically anchor and insert threaded bars very quickly – it sets very fast.



The distance between the wall and bracket must not be more than 300mm unless an opposing bracket can be installed immediately adjacent. In this instance, a better option would be to install a timber joist to mount the bracket.

2.2a Place the wall bracket on the wall with your centre line in the middle of the "V" cut in the middle of the bracket mounting plate. Level the bracket and mark the four fixing holes.

2.2b Drill the four fixing holes with a 12mm bit to the depth of 70mm.

2.2c You should have already obtained the correct chemical anchor, blower or hole cleaning brush before commencement of the installation. Clean the drilled holes using the blower or correct size brush.

2.2d Cut 4 correct size 10mm stainless steel threaded bar. Remember to take into account that 70mm of the thread will insert into the wall and the bracket holds the chute 50mm off the fixing point. Therefore, if your chute needs to stand 100mm off the wall, your threaded bar will need to be 140mm long to create a 20mm exposed thread on which to place a washer and retaining nut.

2.2e Fill the holes with chemical anchor.

2.2f Insert the correct cut size threaded bar turning in a clockwise direction as you insert.

2.2g Use small bits of wood or nails underneath to hold the threaded bar level if required. Read the instructions for setting times.

2.2h Place an M10 stainless nut on each thread and then an M10 penny washer. Offer up the bracket and secure with penny washer and nut. Do not fully tighten yet.

2.2i The holes in the bracket are oval and larger than 10mm to allow a degree of movement. It is usually better to fully tighten the brackets after the entire chute has been assembled. This will allow "fine tuning" to get the exact door and termination heights as well as a perfectly straight drop.

3 Assembling the chute into the brackets

3.1 The decision to start from the top or bottom is a personal one and often dictated by the site conditions.

3.2 The chute can be assembled into the mounting brackets and clamped up using the locking bands prior to the final tightening of the mounting brackets. This will allow find tuning of the chute location and straightness.

3.2a When installing a locking band, make sure there is equal distance top and bottom between the female flared end of the extension piece and the edge of the locking band.

3.2b Attach the over centre catches to the hook brackets and close the catches. Tighten the allen key headed bolts so that the locking band pulls up tight.

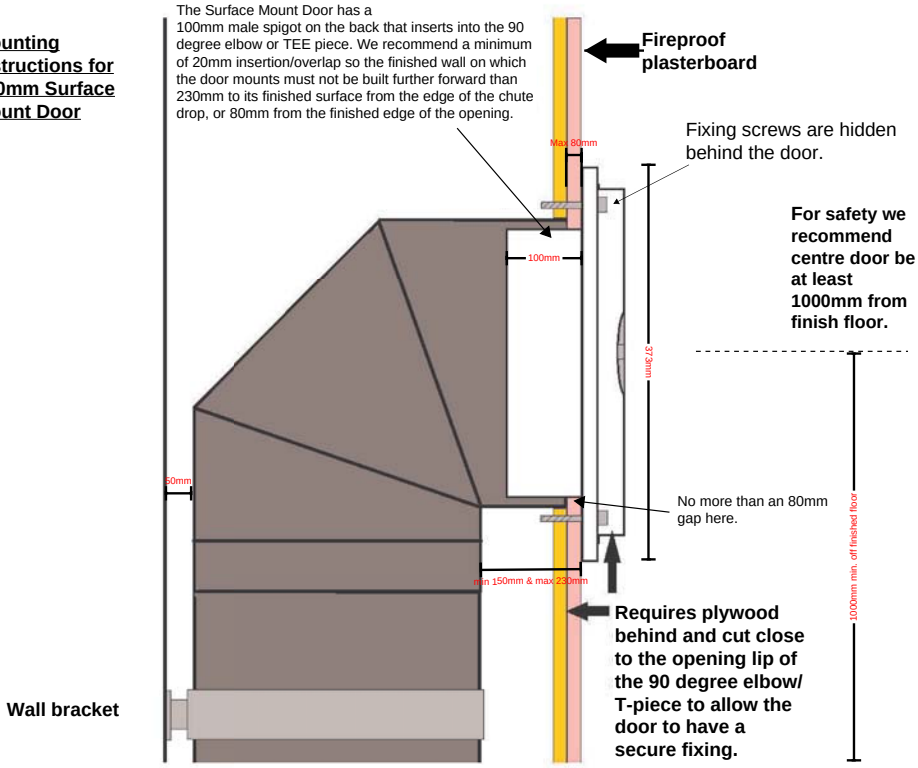
Make sure the side with the catches, sits on top of the side with the hook brackets.

There is no particular best location for the locking band join to sit on the chute circumference.

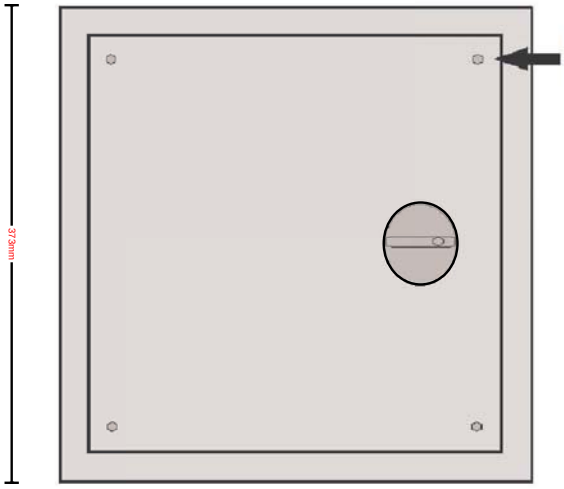
3.2c Once you are happy with the chute location, you can cable tie or squeeze the catch sides using pliers to prevent the catch from ever undoing.

3.3 Locking bands are not required on every component, and the planning instructions regarding their use should be remembered. If necessary, re-read these instructions.

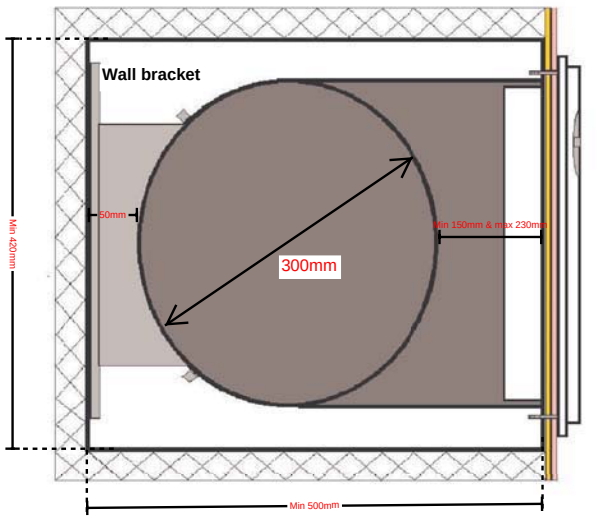
Mounting Instructions for 300mm Surface Mount Door


The Surface Mount Door has a 100mm male spigot on the back that inserts into the 90 degree elbow or TEE piece. We recommend a minimum of 20mm insertion/overlap so the finished wall on which the door mounts must not be built further forward than 230mm to its finished surface from the edge of the chute drop, or 80mm from the finished edge of the opening.
Fireproof plasterboard
Max 80mm
Fixing screws are hidden behind the door.
For safety we recommend centre door be at least 1000mm from finish floor.
100mm
373mm
50mm
No more than an 80mm gap here.
min 150mm & max 230mm
1000mm min. off finished floor
Requires plywood behind and cut close to the opening lip of the 90 degree elbow/ T-piece to allow the door to have a secure fixing.
Wall bracket

Facing view of door


373mm
Fixing bolt
(Not visible with door closed)
Doors are 373mm x 373mm
1 hour fire rated
Child locks as standard
Available in powder coated white or brush stainless steel
Flush fitted handles

Overhead view of chute boxing



The laundry chute boxing must be a minimum of 420mm x 500mm.

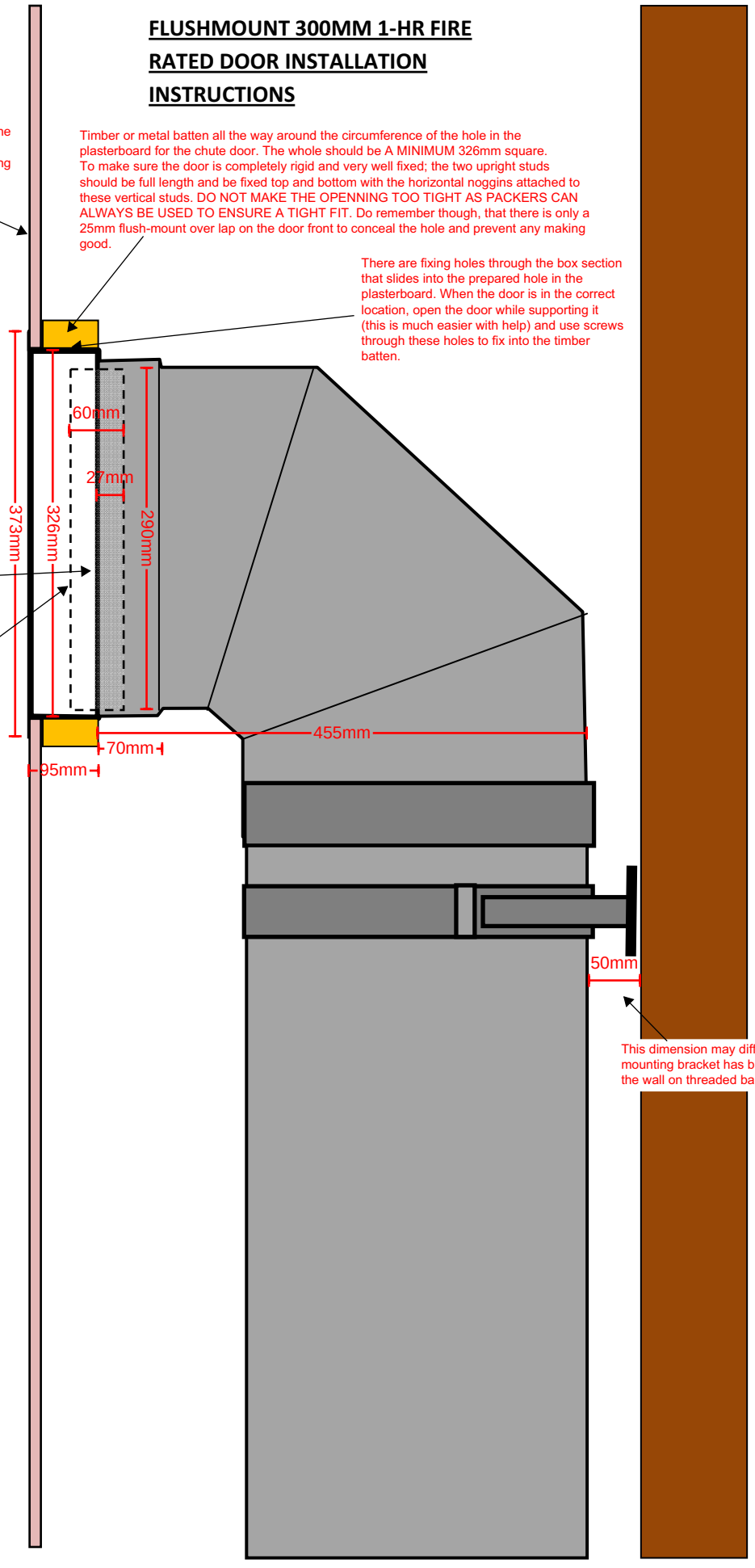
PLEASE NOTE: If you want the chute boxing to be as small as possible; the mounting bracket can be hung from the side and Laundry Chute Solutions can supply a 90 degree or TEE piece with a much shorter forward facing protrusion. A minimum 400mm front to back measurement is achievable. The 420mm side to side measurements is always require to accommodate the door.

FLUSHMOUNT 300MM 1-HR FIRE RATED DOOR INSTALLATION INSTRUCTIONS

Plasterboard. If you want to ensure the fire rating integrity of the door/chute encasing, then this needs to be fire board with 1hr rating. E.g. 2 x 30 minute boards. There is only 30 minute rating required by building control in most domestic UK applications, but all our doors are minimum 1hr rated.

Timber or metal batten all the way around the circumference of the hole in the plasterboard for the chute door. The whole should be A MINIMUM 326mm square. To make sure the door is completely rigid and very well fixed; the two upright studs should be full length and be fixed top and bottom with the horizontal noggins attached to these vertical studs. DO NOT MAKE THE OPENNING TOO TIGHT AS PACKERS CAN ALWAYS BE USED TO ENSURE A TIGHT FIT. Do remember though, that there is only a 25mm flush-mount over lap on the door front to conceal the hole and prevent any making good.

There are fixing holes through the box section that slides into the prepared hole in the plasterboard. When the door is in the correct location, open the door while supporting it (this is much easier with help) and use screws through these holes to fix into the timber batten.

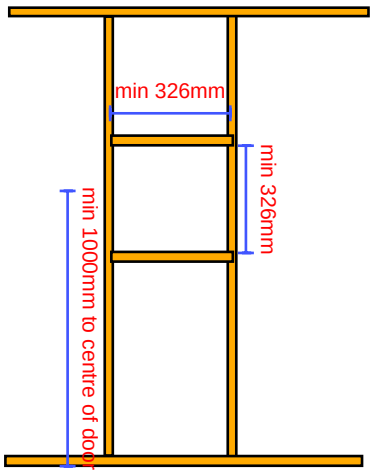


THIS BRIDGING SPIGOT IS AVAILABLE IN A LONGER OPTION IF REQUIRED AND THE MOUNTING SURFACE NEEDS TO BE FURTHER FORWARD THAN THE MEASUREMENTS BELOW.

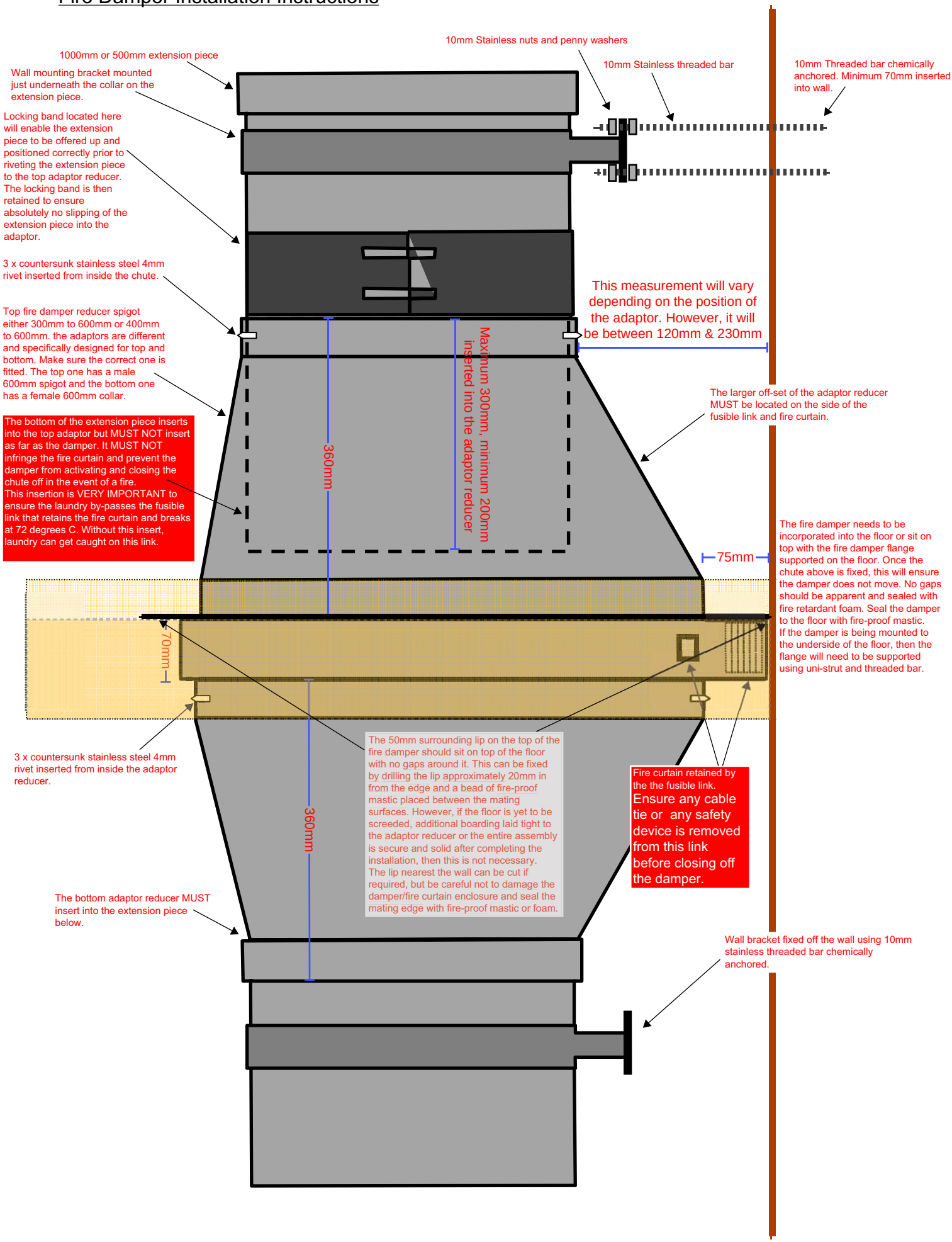
IMPORTANT: This dotted line represents the internal spigot that bridges the chute door and the stainless steel chute coupling immediately behind. There is only a 27mm protrusion for insertion into the stainless coupling so the finished front surface of the chute encasement must be NO MORE than 112mm and NO LESS than 95mm from the finished open edge of the stainless steel coupling (either 90 degree elbow or "Tee" piece) that is left in situ during first fix. This will allow a minimum of 10mm and maximum of 27mm overlap into the stainless steel chute component.

Laundry Chute Solutions always recommend that our chute doors are mounted a minimum of 1000mm to the centre, off the finished floor and have a child-proof lock for added protection.

Diagram showing recommended internal stud-work for mounting of door.



Fire Damper Installation Instructions


1000mm or 500mm extension piece
Wall mounting bracket mounted just underneath the collar on the extension piece.
Locking band located here will enable the extension piece to be offered up and positioned correctly prior to riveting the extension piece to the top adaptor reducer. The locking band is then retained to ensure absolutely no slipping of the extension piece into the adaptor.
3 x countersunk stainless steel 4mm rivet inserted from inside the chute.
Top fire damper reducer spigot either 300mm to 600mm or 400mm to 600mm. the adaptors are different and specifically designed for top and bottom. Make sure the correct one is fitted. The top one has a male 600mm spigot and the bottom one has a female 600mm collar.
The bottom of the extension piece inserts into the top adaptor but MUST NOT insert as far as the damper. It MUST NOT infringe the fire curtain and prevent the damper from activating and closing the chute off in the event of a fire.
This insertion is VERY IMPORTANT to ensure the laundry by-passes the fusible link that retains the fire curtain and breaks at 72 degrees C. Without this insert, laundry can get caught on this link.
3 x countersunk stainless steel 4mm rivet inserted from inside the adaptor reducer.
The bottom adaptor reducer MUST insert into the extension piece below.
10mm Stainless nuts and penny washers
10mm Stainless threaded bar
10mm Threaded bar chemically anchored. Minimum 70mm inserted into wall.
This measurement will vary depending on the position of the adaptor. However, it will be between 120mm & 230mm
Maximum 300mm, minimum 200mm inserted into the adaptor reducer
360mm
The larger off-set of the adaptor reducer MUST be located on the side of the fusible link and fire curtain.
75mm
The fire damper needs to be incorporated into the floor or sit on top with the fire damper flange supported on the floor. Once the chute above is fixed, this will ensure the damper does not move. No gaps should be apparent and sealed with fire retardant foam. Seal the damper to the floor with fire-proof mastic.
If the damper is being mounted to the underside of the floor, then the flange will need to be supported using uni-strut and threaded bar.
70mm
The 50mm surrounding lip on the top of the fire damper should sit on top of the floor with no gaps around it. This can be fixed by drilling the lip approximately 20mm in from the edge and a bead of fire-proof mastic placed between the mating surfaces. However, if the floor is yet to be screeded, additional boarding laid tight to the adaptor reducer or the entire assembly is secure and solid after completing the installation, then this is not necessary.
The lip nearest the wall can be cut if required, but be careful not to damage the damper/fire curtain enclosure and seal the mating edge with fire-proof mastic or foam.
Fire curtain retained by the the fusible link.
Ensure any cable tie or any safety device is removed from this link before closing off the damper.
360mm
Wall bracket fixed off the wall using 10mm stainless threaded bar chemically anchored.

Finishing Touches

If you are using a chute lid on the top, then use the “U” profile trim supplied with the door to cover and protect the sharp flared edge.

Firmly push the trim down on the edge around the parameter until the two edges meet.

Cut the trim with a 5mm to 8mm overlap. Firmly push the two edges together so they mate closely and then finish pushing down the remaining trim.

If you have an exposed un-rolled edge on the bottom of the chute, then you can also use the trim to provide a neat finish and protect the sharp edge.

If you have a chute protruding through the ceiling and the edge that mates with the plasterboard or cupboard roof needs to be tidied, then use a hole hider trim that simply glues to the ceiling with grip-fill or similar.

Operating and Maintenance

Chute Doors – 60 minute minimum fire rating by Chiltern International Fire in accordance with BS476: Part 22: 1987. Test Report: Chilt/IF03029.

Laundry chutes are dangerous to small children. The door heights should be sufficient to eliminate the possibility of children entering the chute and the child locks should always be used if small children are present.

All doors have key locks as standard. The doors are finished with RAL 9003 white powder-coating. The middle of the doors should always be a minimum of 1000mm off the finished floor level, but Laundry Chute Solutions recommend 1200mm as a minimum.

Wipe clean with a damp cloth and polish the exposed surfaces with a non-abrasive furniture polish.

Fire Damper - If a fire damper is fitted, then the fusible link should be checked annually for any signs of corrosion or wear. If the fire damper has been fired, then contact Laundry Chute Solutions to inspect and re-set as necessary.

Look up or down inside of the damper to inspect for any trapped items or damage on a monthly basis.

Tested to British Standard 1366-2:1999 and international standard ISO 10294-1:1996 (E) by BRE Garston in Watford. Test report no. 232943 and CC235890. The damper passes the required 240 minutes up to 1200 degree Celsius whilst maintaining constant pressure under positive pressure of 300Pa.

The damper was also tested at the Warrington Fire Research Centre to BS476 Part 20 Criterion 7.1.1 for 6 full hours. The validation report number is WFRC151309.

Chute Components - The laundry chute is 1.5mm welded or folded modular system, DIN 1.4301 quality glass bead blasted, stainless steel. The components are interlocking with tension bands to prevent, twisting and sliding. The system is airproof to prevent heat loss. It has no sharp edges for laundry to get caught and generates no static charge.

The laundry chute requires no mechanical maintenance. Any visible soiling or dirt can be removed with a cloth and antibacterial cleaner. Any visible stainless parts of the chute can be polished and cleaned using a good quality stainless steel cleaner available from most supermarkets. A cloth attached to a broom handle or suitable extension can be used to clean beyond normal reach.

If inaccessible soiling or odour is present beyond the scope of ordinary cleaning then contact Laundry Chute Solutions Ltd. There is a charge for this service.

Once a month it is important to look up the chute and visually inspect the internal condition of the stainless steel and check there is no laundry caught or resting within the fire damper enclosure.

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